

US EPA ARCHIVE DOCUMENT

Date Out EFB: JUN 23 1982

TO: Product Manager 23 Mountfort
TS-767FROM: Dr. Willa Garner *WLG for*
Chief, Review Branch No. 1
Environmental Fate Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 1471-35, 1471-116, 1471-120

Chemical: Trifluralin

Type Product: Herbicide

Product Name: Treflan

Company Name Flanco

Submission Purpose Remove rice from crop rotation restriction

ZBB Code: other

ACTION CODE: 305

Date in: 5/13/82

EFB # ~~317-319~~ 325-327

Date Completed: 2/21/82

TAIS (level II) Days

56 64

2

Deferrals To:

Ecological Effects Branch

Residue Chemistry Branch

Toxicology Branch

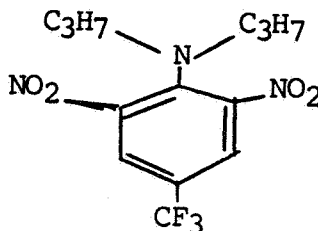
1.0 INTRODUCTION

Elanco has submitted data to support their request that rice be removed from the current rotational crop restriction for Treflan M. T. F. (EPA Reg No. 1471-116) and Treflan Pro-5 (EPA Reg No. 1471-120). Current rotational crop restriction allows only for planting as rotational crops those crops for which Treflan has been previously registered.

1.1 Chemical

Common name: Trifluralin
Trade name: Treflan
Chemical name: 2,6-dinitro-N,N-di-n-propyl-a,a,a-trifluoro-p-toluidine.

Chemical structure:



2.0 USE DIRECTIONS

A copy of the directions for use is appended to this review.

3.0 REVIEW OF DATA

Residue Data on Trifluralin in Rough Rice, Shelled Rice and Rice Hulls When Rice Is Planted as a Rotational Crop Following a 2X Application of Trifluralin for Rhizome Johnsongrass Control. July. 1981. O.D. Decker. Lilly Research Laboratories, Division of Eli Lilly and Company, Greenfield, Indiana 46140. Acc. # 247420.

Experimental

Treflan 4EC was applied to field plots in Arkansas and Louisiana. Treatment rates ranged from 1.5 to 2.0 lb. ai/A for medium soils and to 3.0 lb. ai/A for a fine soil. These rates were 2X the label rate for cotton and soybeans. Approximately one year later, rice varieties Saturn and Starbonnet were planted as a rotational crop.

Analysis of all crop tissue samples for trifluralin were carried out by gas chromatography equipped with an electron capture detector.

Results

No detectable residues of trifluralin were found in the rough rice or shelled rice samples. Two rice hull samples showed residues of less than 0.04 ppm while the other two showed no detectable residues (Table 1).

3.0 CONCLUSIONS

Application of Treflan 4EC at 2X rate did not result in accumulation of detectable residues in rough rice or shelled rice and no significant residues in rice hulls when rice was planted as a rotational crop approximately one year after treatment.

No data on possible metabolites were presented.

No data on analyses of rice straw were presented

No data on the environmental conditions (e.g. rainfall, temperature, soil characteristics) were given for the test period.

4.0 RECOMMENDATIONS

EFB cannot concur with the request to have rice removed from the current rotational crop restriction for Treflan. Data on residue levels of metabolites occurring in rough and shelled rice, and rice hulls must be provided, or an explanation as to why such data are not necessary. Data on residue levels occurring in rice straw must be provided.

Also, data on the environmental conditions during the test period should be provided.



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TABLE I

TRIFLURALIN RESIDUES IN ROUGH RICE, SHELLED RICE, AND RICE HULLS

Experiment Number and Location	Texture	Treatment Rate (lb/A)	Treatment Date	Planting Date	Sampling Date	Part Assayed	Variety	ppm Trifluralin Found
KRB 9,0-17 Crowley, LA	Medium	1.5	5-25-79	5-23-80	9-22-80	Rough Rice	Saturn	NDR*
Jerry Aquillard Sweet Lake, LA	Medium	2.0	5-15-79	4-80	8-27-80	Shelled Rice		NDR
						Rice Hulls		NDR
						Rough Rice	Saturn	NDR
Bill Arbuckle Tallulah, LA	Fine	3.0	5-79	5-1-80	8-80	Shelled Rice		NDR
						Rice Hulls		<0.04
						Rough Rice	Starbonnet	NDR
Charles Brietz Harrisburg, AR	Medium	1.5	5-79	4-80	9-80	Shelled Rice.		NDR
						Rice Hulls		NDR
						Rough Rice	Starbonnet	NDR
						Shelled Rice		NDR
						Rice Hulls		<0.04

*NDR = No detectable residue.